

What is claimed is:

1 1. A method in a data processing system for binding a  
2 plurality of processes to a destination address, the  
3 method comprising the data processing system implemented  
4 steps of:  
5 receiving a request for a connection, wherein the  
6 request includes a destination address;  
7 selecting a process from the plurality of processes  
8 to form a selected process;  
9 changing the destination address in the request to  
10 an address for the selected process; and  
11 sending the request to the selected process using  
12 the address for the selected process.

1 2. The method of claim 1 further comprising:  
2 detecting a response from the selected process,  
3 wherein the response includes a source address; and  
4 changing the source address to the destination  
5 address.

1 3. The method of claim 1, wherein the plurality of  
2 processes is a plurality of server daemons.

1 4. The method of claim 1, wherein further comprising:  
2 creating a record in a table, wherein the record  
3 provides mapping between packets flowing to and from a  
4 client and between packets flowing to and from the  
5 selected process.

1 5. The method of claim 4, wherein each record includes  
2 a source IP address, a destination IP address, a source  
3 TCP port, a destination TCP port, and an address of the  
4 selected process.

1 6. The method of claim 1, wherein the step of selecting  
2 a process is performed using a load balancing process.

1 7. A method in a data processing system for routing  
2 packets from a client to a selected process within a  
3 plurality of processes servicing a connection between the  
4 data processing system and the client, the method  
5 comprising the data processing system implemented steps  
6 of:

7 receiving a packet for the connection between the  
8 data processing system and the client, wherein the packet  
9 includes a destination address; and

10 translating the destination address to an  
11 intermediate destination address, which is an address for  
12 the selected process within the plurality of processes.

1 8. The method of claim 7, wherein the translating step  
2 is performed using a table that provides mapping between  
3 packets which flow to and from the client and between  
4 packets that flow to and from the plurality of processes.

1 9. The method of claim 7, wherein the plurality of  
2 processes comprise a plurality of server daemons.

1 10. The method of claim 7, wherein the table includes a  
2 record for each connection.

1 11. The method of claim 10 further comprising:  
2 detecting a termination of a connection; and  
3 removing a record from the table in response to a  
4 termination of a connection associated with the record.

1 12. A method in a computer for routing packets between a  
2 plurality of server daemons on the computer and a client,  
3 the method comprising the computer implemented steps of:  
4 receiving a packet from a client, wherein the packet  
5 includes a destination address;  
6 determining whether a connection exists for the  
7 client;  
8 responsive to a determination that a connection is  
9 absent for the client, selecting a server daemon from the  
10 plurality of server daemons to service the client,  
11 wherein the plurality of server daemons service the  
12 destination address in the packet and wherein the  
13 plurality of server daemons have assigned destination  
14 addresses; and  
15 altering the destination address in the packet to an  
16 assigned destination address for the server daemon.

1 13. The method of claim 12 further comprising:  
2 sending the packet to the server daemon using the  
3 assigned destination address.

1 14. The method of claim 13 further comprising:  
2 receiving a return packet for the client from the  
3 server daemon, wherein the return packet includes a  
4 source address; and  
5 altering the source address in the return packet to  
6 that of the destination address.

1 15. The method of claim 12 further comprising:  
2 responsive to selecting the server daemon, creating  
3 a record in a table in which the record includes an  
4 address of the server daemon and the destination address.

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1 16. A system in a data processing environment  
2 comprising:  
3 a plurality of processes, wherein the plurality of  
4 processes service a destination address and have process  
5 addresses;  
6 a packet routing layer, wherein the packet routing  
7 layer routes a packets to the plurality of processes  
8 using a destination addresses within the packets;  
9 a dispatch layer, wherein the dispatch layer has a  
10 plurality of modes of operation including:  
11 a first mode of operation in which the dispatch  
12 layer receives a packet from a client, wherein the packet  
13 includes the destination address;  
14 a second mode of operation, responsive to  
15 receiving the packet, in which the dispatch layer  
16 identifies a process within the plurality of processes to

17 service the client, wherein the process is an identified  
18 process;  
19 a third mode of operation in which the dispatch  
20 layer translates the destination address to a  
21 process address for the identified process within  
22 the plurality of processes; and  
23 a fourth mode of operation, responsive to the  
24 third mode of operation, in which the packet is sent  
25 to the packet routing layer.

1 17. The system of claim 16, wherein each packet includes  
2 a source address and wherein the dispatch layer further  
3 includes:  
4 a fifth mode of operation in which the dispatch  
5 layer receives a packet from the identified process for  
6 the client; and  
7 a sixth mode of operation , responsive to the  
8 fifth mode of operation, in which the dispatch layer  
9 translates the source address in the packet of the  
10 destination address.

1 18. The system of claim 16, wherein the second mode of  
2 operation includes:  
3 a first submode of operation in which a  
4 determination is made as to whether a connection exists  
5 for the client;  
6 a second submode of operation, responsive to a  
7 determination that a connection is absent for the client  
8 in the first submode of operation, in which a connection  
9 is created and a process within the plurality of

10 processes is assigned to service the connection, wherein  
11 the process is the identified process; and  
12 a third submode of operation, responsive to a  
13 determination that a connection exists for the client, in  
14 which a process assigned to the connection is identified  
15 and forms the identified process.

1 19. The system of claim 16, wherein the packet routing  
2 layer is a transmission control protocol layer.

1 20. The system of claim 16, wherein the plurality of  
2 processes is a plurality of server daemons.

1 21. A data processing system for binding a plurality of  
2 processes to a destination address, the data processing  
3 system comprising:

4 receiving means for receiving a request for a  
5 connection, wherein the request includes a destination  
6 address;

7 selection means for selecting a process from the  
8 plurality of processes to form a selected process;

9 changing means for changing the destination address  
10 in the request to an address for the selected process;  
11 and

12 sending means for sending the request to the  
13 selected process using the address for the selected  
14 process.

1 22. The data processing system of claim 21, wherein the  
2 changing means is a first changing means and further  
3 comprising:

4 detection means for detecting a response from the  
5 selected process, wherein the response includes a source  
6 address; and

7 second changing means for changing the source  
8 address to the destination address.

1 23. The data processing system of claim 21, wherein the  
2 plurality of processes is a plurality of server daemons.

1 24. The data processing system of claim 21, wherein  
2 further comprising:

3 creation means for creating a record in a table,  
4 wherein the record provides mapping between packets  
5 flowing to and from a client and between packets flowing  
6 to and from the selected process.

1 25. The data processing system of claim 24, wherein each  
2 record includes a source IP address, a destination IP  
3 address, a source TCP port, a destination TCP port, and  
4 an address of the selected process.

1 26. The data processing system of claim 21, wherein the  
2 selection means is performed using a load balancing  
3 process.

1 27. A data processing system for routing packets from a  
2 client to a selected process within a plurality of  
3 processes servicing a connection between the data  
4 processing system and the client, the data processing  
5 system comprising:

6 receiving means for receiving a packet for the  
7 connection between the data processing system and the  
8 client, wherein the packet includes a destination  
9 address; and

10 translating means for translating the destination  
11 address to an intermediate destination address, which is  
12 an address for the selected process within the plurality  
13 of processes.

1 28. The data processing system of claim 27, wherein the  
2 translating means performed using a table that provides  
3 mapping between packets which flow to and from the client  
4 and between packets that flow to and from the plurality  
5 of processes.

1 29. The data processing system of claim 27, wherein the  
2 plurality of processes comprise a plurality of server  
3 daemons.

1 30. The data processing system of claim 27, wherein the  
2 table includes a record for each connection.



1 31. The data processing system of claim 30 further  
2 comprising:  
3 detection means for detecting a termination of a  
4 connection; and  
5 removing means for removing a record from the table  
6 in response to a termination of a connection associated  
7 with the record.

1 32. Computer readable code for routing packets between a  
2 plurality of server daemons on a computer and a client,  
3 said computer readable code comprising:  
4 first subprocesses for receiving a packet from a  
5 client, wherein the packet includes a destination  
6 address;  
7 second subprocesses for determining whether a  
8 connection exists for the client;  
9 third subprocesses, responsive to a determination  
10 that a connection is absent for the client, for selecting  
11 a server daemon from the plurality of server daemons to  
12 service the client, wherein the plurality of server  
13 daemons to service the destination address in the packet  
14 and wherein the plurality of server daemons have assigned  
15 destination addresses; and  
16 fourth subprocesses for altering the destination  
17 address in the packet to an assigned destination address  
18 for the server daemon.

1 33. The computer readable code of claim 32 further  
2 comprising:

3 fifth subprocesses for sending the packet to the  
4 server daemon using the assigned destination address.

1 34. The computer readable code of claim 32 further  
2 comprising:

3 sixth subprocesses for receiving a return packet for  
4 the client from the server daemon, wherein the return  
5 packet includes a source address; and

6 seventh subprocesses for altering the source address  
7 in the return packet to that of the destination address.

1 35. The computer readable code of claim 32 further  
2 comprising:

3 eighth subprocesses, responsive to selecting the  
4 server daemon, for creating a record in a table in which  
5 the record includes an address of the server daemon and  
6 the destination address.

1 36. A computer program product for binding a plurality  
2 of processes to a destination address, the computer  
3 program product comprising:

4 a computer readable medium;

5 first instructions for receiving a request for a  
6 connection, wherein the request includes a destination  
7 address;

8 second instructions for selecting a process from the  
9 plurality of processes to form a selected process;

10        third instructions for changing the destination  
11 address in the request to an address for the selected  
12 process; and  
13        fourth instructions for sending the request to the  
14 selected process using the address for the selected  
15 process,  
16        wherein the instructions are embodied within the  
17 computer readable medium.

1 37. The computer program product of claim 36 further  
2 comprising:  
3        fifth instructions for detecting a response from the  
4 selected process, wherein the response includes a source  
5 address; and  
6        sixth instructions for changing the source address  
7 to the destination address.

1 38. A computer program product for routing packets from  
2 a client to a selected process within a plurality of  
3 processes servicing a connection between the data  
4 processing system and the client comprising:  
5        a computer readable medium;  
6        first instructions for receiving a packet for the  
7 connection between the data processing system and the  
8 client, wherein the packet includes a destination  
9 address; and  
10        second instructions for translating the destination  
11 address to an intermediate destination address, which is  
12 an address for the selected process within the plurality  
13 of processes,

14        wherein the instructions are embodied within the  
15 computer readable medium

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